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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RICHER, AARON M

ART UNIT

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2628

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/018,355	Applicant(s) KITANO ET AL.	
	Examiner Aaron M. Richer	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 5, 13, 14, 20, 25, 33 and 34 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-9, 15-17, 21-23, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mok (U.S. Patent 6,008,986) in view of Twyford (U.S. Patent 6,386,413) and further in view of Lee (WO 01/15940).
4. As to claims 1, 15, and 21, claim 1 recites "A display apparatus comprising: a mounted displaying means for displaying visual information". Mok discloses "a display... placed in the upper housing portion... of the computer housing" (col. 2, lines 50-52). Figures 1-5 of Mok show a display panel (element 24) mounted on a computer housing. Claim 1 further recites "an operating means for outputting a predetermined signal to control an operation of a device". Mok further discloses operating means, in the form of a keyboard: "A keyboard is placed on top of the lower portion of the computer housing" (col. 2, lines 53-54). Finally, Claim 1 recites "a supporting means for supporting said operating means, said supporting means being provided near a peripheral portion of said displaying means, said operating means being rotatable on

said supporting means about a horizontal axis". Mok discloses supporting means for supporting the operating means, in the form of a mechanical link, provided near a peripheral portion of the display (see fig. 3; col. 2, lines 53-67; col. 3, lines 1-11). This disclosure also shows that the operating means is pivotable, or rotatable, on the supporting means with respect to the displaying means and is projected forward. Since the operating means is also lifted on one side (fig. 3), it has rotated about a horizontal axis.

Mok does not disclose a mounted displaying means being mounted in a fixed position in an automotive vehicle, nor does Mok disclose multiple operating projected positions. Twyford, however, discloses display means mounted fixedly on a dashboard (col. 4, lines 12-33; note the complexity of the mounting process, this inevitably results in a non-mobile computer). Twyford further discloses a keyboard that is used in multiple projected positions (col. 4, lines 57-67). The motivation for a "fixed" display is to improve stability and the motivation for multiple projected positions is to increase flexibility (col. 1, lines 44-54). It would have been obvious to one skilled in the art to modify Mok to use fixed display means and multiple keyboard positions in order to improve stability and flexibility as taught by Twyford.

Neither Mok nor Twyford discloses a system mounted within an instrument panel substantially flush to the instrument panel at a time of non-operation. Lee, however, discloses a keyboard and display mounted to the instrument panel of a vehicle (fig. 2) that folds up flush to said instrument panel when not being used (fig. 1; p. 2, lines 9-14). The motivation for this is to best utilize the keyboard installation space (p. 2, lines 9-14).

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It would have been obvious to one skilled in the art to modify Mok in view of Twyford to mount a keyboard so that it is substantially flush with the instrument panel when not being used in order to maximize the use of the space otherwise taken up by the keyboard as taught by Lee.

5. As to claims 2, 16, and 22, Claim 2 recites "The display apparatus as claimed in claim 1, wherein said operating means is set, at a time of non-operation, to a first position in which an operating surface faces a display surface of said displaying means". Mok discloses that "When the upper portion or display panel...is swung closed or downwardly, an opposite movement of the mechanism takes place, and the keyboard...moves back into the rest position" (col. 3, lines 58-62). It is clearly shown by Figure 6 of Mok that the display means and the operating means (keyboard) are facing each other in this "rest position". The "rest position" disclosed by Mok is equivalent to the "time of non-operation" recited by Claim 2.

Claim 2 further recites that the operating means is "set, at a time of operation, to a second position in which, rotating said first position, use of said operating surface to initiate the operation is accessible for use". Mok discloses that "When the laptop computer 50 is swung open, as shown in FIGS. 4 and 5, the lower bar 56 is pulled towards the rear of the computer 50. This movement of the lower bar 56 rotates the gears 62 counter-clockwise and forces the upper bar 56 to move towards the front of the computer. As a result, the keyboard 26 is slid outwardly towards the front and concurrently tilted upwardly" (col. 3, lines 51-58). This outward and upward keyboard

movement, after the pivoting or rotation of position, is done so that the user can use the keyboard for operation, as in Claim 2.

6. As to claims 3, 17, and 23, claim 3 recites "The display apparatus as claimed in claim 2, wherein said supporting means comprises an arm portion, said arm portion being housed when said operating means is set to said first position". Mok discloses that "said lower bar having an extension arm journaled to said display panel [that] displaces said lower bar to tilt said keyboard angularly upwardly while concurrently causing said lower bar to rotate said gears and sliding the upper bar and the therewith attached keyboard forwardly and outwardly relative to the housing" (col. 4, lines 40-54). Clearly this describes an arm portion that projects the operating means (keyboard) forward from the displaying means when used.

Claim 3 further recites "[the arm portion] being projected forward when said operating means is set to said second position so as to separate said displaying means from said operating means". Mok discloses that "closing of said display panel causes said lower bar to move forwardly so as to lower the keyboard into the housing" (col. 4, lines 55-61). This describes an arm portion moving back into the housing with the operating means (keyboard) when the operating means are not used.

7. As to claims 7 and 27, claim 7 recites "The display apparatus as claimed in claim 2, wherein the second position is a position in which the operating surface of said operating means forms an obtuse angle relative to the display surface of said displaying means." Figures 2 and 5 of Mok clearly show the display surface (element 22) at an obtuse angle with the operating means (keyboard, element 26).

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8. As to claims 8 and 28, claim 8 recites "The display apparatus as claimed in claim 1, further comprising an angle adjusting means for adjusting an angle to be formed between the operating surface of said operating means and the display surface of said displaying means." Mok discloses that the display panel is "pivotable between a folded down closed position and upwardly raised open positions" (col. 5, lines 31-33). The display panel is pivotable with respect to the operating panel and therefore an angle adjustment takes place every time the display panel is pivoted.

9. As to claims 9 and 29, Mok in view of Twyford and Lee discloses the display apparatus as claimed in claim 1. Twyford further discloses a display apparatus installed in an automobile (fig. 3).

10. Claims 4, 6, 18, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mok in view of Twyford and Lee, and further in view of Batio (U.S. Patent 5,949,643).

11. As to claims 4, 18, and 24, claim 4 recites "The display apparatus as claimed in claim 2, wherein, when said operating means is set to said first position, said displaying means makes a display only on a display surface which is free from overlapping with said operating means." Mok in view of Twyford and Lee teaches a display apparatus as claimed in claim 2. None of Mok, Twyford, and Lee teaches displaying means that makes a display only on a display surface which is free from overlapping. Batio, however, discloses "a dual LCD display or split screen 101, with each section being pivotally attached to a keyboard half-section. Each half of the split-screen is independently, pivotally mounted so that each may be moved separately" (col. 8, lines

14-24). Batio further discloses that the screens can be used simultaneously for different purposes: "one half of the split-screen 101 may be used for normal computer functions, such as word processing, by means of the first microprocessor, whereas the second half of the split screen 101 may be used for playing video games via the dedicated game-microprocessor" (col. 8, lines 50-56). Batio discloses many advantages of a split display, such as for two-player game play (col. 3, lines 61-67; col. 4, lines 1-4) and for use as a translation device (col. 9, lines 15-23). Batio also discloses that the split screen allows the device to be "compactly stored" (col. 2, lines 5-11). Being pivotally mounted, these screens can be folded down onto the operating means (keyboard half-section). It is also shown that the two screens can be used independently of each other. If one screen is in use (free from overlapping means), and the other is folded-down and not in use (not free from overlapping means), only the display surface that is free from overlapping means will be used, as in Claim 4. It would have been obvious to one skilled in the art to modify Mok in view of Twyford and Lee to include a split display, in which only the part of the display free from overlapping means would be used, in order to make the device more useful as taught by Batio.

12. As to claims 6 and 26, claim 6 recites "The display apparatus as claimed in claim 2, wherein said displaying means displays the visual information in a plurality of screens, and wherein, in case the display means is to make a display the visual information when said operating means is set to said first position, the only the part of the display surface free from overlapping with said operating means is operable to display the visual information, and wherein, in case the display means is to display the

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visual information when said operating means is set to said second position, all of the display surface is operable to display the visual information.” Mok in view of Twyford and Lee teaches a display apparatus as claimed in claim 2. None of Mok, Twyford, and Lee teaches a divided display when operating means are set to first position or second position. Batio, however, discloses a divided display on the entire display surface: “one half of the split-screen 101 may be used for normal computer functions, such as word processing, by means of the first microprocessor, whereas the second half of the split screen 101 may be used for playing video games via the dedicated game-microprocessor” (col. 8, lines 50-56). This describes a divided display on all of the display surface. Also, since Batio states that the screens can be used independently of one another (see rejection of Claim 4), and functions such as word processing and video games use divided displays to show information, toolbars, etc., it is implied that Batio’s invention would display a divided display on only one screen if the other screen was not free from overlapping means. In this way, Batio is describing a divided display made only on the display surface free from overlapping with operating means. It would have been obvious to modify Mok in view of Twyford and Lee to include a divided display available on part or all of a screen, in order to allow users to perform multiple tasks at one time as taught by Batio.

13. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mok in view of Twyford, Lee, and Batio and further in view of Suga (U.S. Patent 4,800,376).

None of Mok, Twyford, Lee, or Batio discloses an invention wherein said displaying means changes a displaying scale depending on a size of the display surface

available for displaying. Suga, however, discloses a tiled display system in which an encoder enlarges a display corresponding to the size of the total display, in this case the number of decoders for displays (col. 2, lines 47-57). The motivation for this is that more screens comprise a larger display that can be seen by more people (col. 1, lines 30-35). It would have been obvious to one skilled in the art to modify Mok, Twyford, Lee and Batio to change a display scale depending on the size of a display surface in order to make a display larger to attract the attention of more people as taught by Suga.

14. Claims 10-12 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mok in view of Twyford and Lee and further in view of Ames (U.S. Patent 4,787,040).

15. As to claims 10 and 30, Mok in view of Twyford and Lee discloses the display apparatus as claimed in claim 1. Mok in view of Twyford and Lee does not disclose an invention wherein said operating means permits a user to operate one or more devices, the predetermined signal being output to the device being operated by the user. Ames, however, discloses an operating means that operates many devices, such as climate control and a CD player (fig. 3). The motivation for this is to provide a single interface for many computerized automobile functions, such as an electronic compass display and appointment calendar (col. 2, lines 20-43). It would have been obvious to one skilled in the art to modify Mok in view of Twyford and Lee to operate one or more devices in order to provide a single interface for many functions as taught by Ames.

16. As to claims 11 and 31, Mok in view of Twyford and Lee and further in view of Ames discloses the display apparatus as claimed in claim 10. Ames further discloses

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an invention wherein the displaying means is used to display visual information relating to the user's operation of the device via the operating means (fig. 3; col. 5, lines 33-62).

17. As to claims 12 and 32, Mok in view of Twyford and Lee and further in view of Ames discloses the display apparatus as claimed in claim 11. Ames further discloses an invention wherein the one or more devices include at least one of an audio device, an image reproducing device, and a navigation device (fig. 3; col. 5, lines 33-62).

Conclusion

18. Claims 5, 13, 14, 20, 25, 33, and 34 are allowed.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMR
5/7/07



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